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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,284	03/12/2004	Kyung-geun Lee	1293-1741	6448
49455 7590 08/23/2007 STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			EXAMINER DANG, HUNG Q	
			ART UNIT 2621	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,284

Applicant(s)

LEE ET AL.

Examiner

Hung Q. Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9, 14-22 and 27-29 is/are rejected.
- 7) ☐ Claim(s) 6, 8, 10-13 and 23-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/03/2004, 01/04/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Applicant is advised that should claims 25 and 26 be found allowable, claims 25 and 26 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. Sec. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. Sec. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping of musical notes read from memory and upon recognizing that particular sequence, causes another defined series of notes to be played, defines a functional interrelationship among that data and the computing processes performed when utilizing that data, and as such is statutory because it implements a statutory process.

Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 1-16 recite, "an information storage medium comprising a reproduction-only area in which recording speed information and/or reproducing speed information which indicate whether a drive can record and/or reproduce data on the information storage medium are recorded" which does not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-5, 16-22, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Osakabe (US Patent 6,894,961).

Regarding claim 1, Osakabe discloses an information storage medium (column 1, lines 33-35) comprising a reproduction-only area in which recording speed

information and/or reproducing speed information which indicate whether a drive can record and/or reproduce data on the information storage medium are recorded (column 1, lines 41-44, 50 – column 2, line 10; column 5, lines 31-47).

Regarding claim 3, Osakabe also discloses a lead-in area (column 5, lines 45-47); a user data area (column 2, lines 8-10; column 4, lines 59-61); and a lead-out area (column 5, lines 45-47); wherein the recording speed information and/or the reproducing speed information is recorded in a reproduction-only area formed in at least one of the lead-in and lead-out area (column 5, lines 45-47).

Regarding claim 4, Osakabe also discloses the recording speed information and/or the reproducing speed information are recorded in both the lead-in and the lead-out areas (column 5, lines 45-47).

Regarding claim 5, Osakabe also discloses the reproduction-only area is a disk control data zone (column 5, lines 31-47).

Regarding claim 16, Osakabe also discloses the recording speed information and/or the reproducing speed information are recorded in the reproduction-only area at least two times (column 5, lines 45-47).

Regarding claim 17, Osakabe discloses a method for recording and/or reproducing data in an information storage medium (column 2, lines 11-17), the method comprising: recording, as reproduction-only data in a reproduction-only area, recording speed information and/or reproducing speed information, which is used to indicate speed capabilities to a drive (column 1, lines 41-44, 50-65; column 5, lines 31-47); and recording or reproducing data on the information storage medium when a recording

speed or a reproducing speed capability of the drive matches the recording speed information or the reproducing speed information (Fig. 3; column 8, lines 35-61).

Regarding claim 18, Osakabe also discloses the recording and/or reproducing are performed by the drive (Fig. 3; column 8, lines 35-61), and wherein the drive and the information storage medium are based on different standards (column 5, lines 19-24).

Regarding claim 19, Osakabe also discloses the recording speed information and/or the reproducing speed information are recorded in at least one byte of the reproduction-only area (column 6, lines 46-56).

Regarding claim 20, Osakabe also discloses the information storage medium includes a lead-in area (column 5, lines 45-47), a user data area (column 2, lines 8-10; column 4, lines 59-61), and a lead-out area (column 5, lines 45-47), and the recording speed information and/or the reproducing speed information is recorded in a reproduction-only area formed in at least one of the lead-in and lead-out areas (column 5, lines 45-47).

Regarding claim 21, Osakabe also discloses the recording speed information and/or the reproducing speed information is recorded in both the lead-in and the lead-out areas (column 5, lines 45-47).

Regarding claim 22, Osakabe also discloses the reproduction-only area is a disk control data zone (column 5, lines 19-47).

Regarding claim 27, Osakabe discloses a drive system for recording and/or reproducing data on an information storage medium (Fig. 1) having a reproduction-only area in which recording speed information and/or reproducing speed information which

indicates whether a drive can record and/or reproduce data on the information storage medium are recorded (column 1, lines 39-49; column 5, lines 45-47), comprising: a pickup which records and/or reproduces the data from the information storage medium (Fig. 1; column 8, lines 25-34); wherein, when the information storage medium has been inserted into the drive system, the drive system reads out the recording speed information and/or reproducing speed information and records and/or reproduces data according to a recording speed information and/or reproducing speed information (Fig. 3; column 8, lines 35-61).

Claims 1-3, 5, 9, and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et al. (US Patent 6,072,759).

Regarding claim 1, Maeda et al. disclose an information storage medium (Fig. 1A; Fig. 1B) comprising a reproduction-only area in which recording speed information and/or reproducing speed information which indicate whether a drive can record and/or reproduce data on the information storage medium are recorded (column 8, line 34 – column 9, line 39).

Regarding claim 2, Maeda et al. also disclose the recording speed information and/or the reproducing speed information are recorded in at least one byte of the reproduction-only area (column 9, lines 35-39).

Regarding claim 3, Maeda et al. also disclose a lead-in area (column 8, line 34 – column 9, line 67; Fig. 5A; Fig. 5B; Fig. 5C); a user data area (Fig. 5A; Fig. 5B; Fig. 5C); and a lead-out area (Fig. 5A; Fig. 5B; Fig. 5C), wherein the recording speed information and/or the reproducing speed information is recorded in a reproduction-only area

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formed in at least one of the lead-in and lead-out areas (column 8, line 34 – column 9, line 39).

Regarding claim 5, Maeda et al. also disclose the reproduction-only area is a disk control data zone (column 8, line 34 – column 9, line 67).

Regarding claim 9, Maeda et al. also disclose the recording speed information and/or the reproducing speed information are recorded in a combination of the zeroth through seventh bits (b0 through b7) of an m-th byte of the disk control zone (column 9, lines 31-39).

Regarding claim 14, Maeda et al. also disclose the recording speed information and/or reproducing speed information are recorded using a combination of bits in a byte of the reproduction-only area (column 9, lines 35-39).

Regarding claim 15, the recording speed information and/or reproducing speed information are recorded in a hexadecimal or binary format (column 9, lines 35-39).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al. (US Patent 6,072,759) as applied to claims 1-3, 5, 9, and 14-15 above, and further in view of Ohno et al. (US Patent 6,628,602).

Regarding claim 4, see the teachings of Maeda et al. as discussed in claim 3 above. However, Maeda et al. do not disclose the recording speed information and/or the reproducing speed information are recorded in the lead-out area.

Ohno et al. disclose the recording information recorded in the lead-in area is repeatedly recorded in the lead-out area (column 1, lines 58-64).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the repeating in the lead-out area of recording information recorded in the lead-in area disclosed by Ohno et al. into the information storage medium disclosed by Maeda et al. for backup reason. The incorporated feature would make the information accessible even when one of the lead-in and lead-out areas becomes unreadable.

Claims 7, 16, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al. (US Patent 6,072,759) as applied to claims 1-3, 5, 9, and 14-15 above, and further in view of Kondo (US Patent 6,600,716).

Regarding claim 7, see the teachings of Maeda et al. as discussed in claim 5 above. Further, Maeda et al. also disclose the recording speed information and/or the reproducing speed information is recorded in one byte of the disk control zone (column 9, lines 27-39). However, Maeda et al. do not disclose recording speed information and/or the reproducing speed information are recorded in at least two bytes in the disk control zone.

Kondo discloses the recording information recorded in the lead-in area is repeatedly recorded in the lead-in area (column 13, lines 50-54).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the repeating in the lead-in area of recording information recorded in the lead-in area disclosed by Kondo into the information storage medium disclosed by Maeda et al. making the recording speed information is recorded in at least two bytes of the disk control zone for backup reason. The incorporated feature would make the information accessible even when the lead-in area becomes unreadable.

Claim 16 is rejected for the same reason as discussed in claim 7 above.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al. (US Patent 6,072,759) and Komoda et al. (US Patent 6,701,063).

Regarding claim 28, Maeda et al. disclose a drive system for recording data on an information storage medium (column 22, lines 41-67), comprising: an audio/video (AV) encoder which compresses an AV signal according to a specified compression scheme and outputs compressed AV data (column 22, lines 41-63; Fig. 16; Fig. 25); a digital signal processor which receives the compressed AV data, adds data for electronic code correction (ECC) processing to the compressed AV data (column 18, lines 40-42), wherein the data includes recording speed information and/or reproducing speed information (column 9, lines 35-39).

However, Maeda et al. do not disclose the digital signal processor to modulates the resulting data according to a specified modulation scheme and outputs modulated data; a radio frequency (RF) amplifier which converts the modulated data into an RF signal; and a pickup which records the RF signal on the information storage medium.

Komoda et al. disclose a digital signal processor to modulates the resulting data according to a specified modulation scheme and outputs modulated data (column 2, lines 20-23); a radio frequency (RF) amplifier which converts the modulated data into an RF signal (column 2, lines 22-24); and a pickup which records the RF signal on the information storage medium (column 2, lines 24-26).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the digital signal processor to modulate and output of the data, the RF amplifier, and the pickup to record the signal on the information storage medium disclosed by Komoda et al. into the drive system disclosed by Maeda et al. The incorporated feature is necessary to optimize the recording onto the recording medium.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al. (US Patent 6,072,759) and Okada et al. (US Patent 6,148,140).

Regarding claim 29, Maeda et al. disclose a drive system (Fig. 22; Fig. 23A; Fig. 37A) for reproducing data recorded on an information storage medium (column 2, line 50 – column 3, line 7), comprising; a pickup which detects an optical signal from the information storage medium (Fig. 22; Fig. 23A; Fig. 37A; column 19, lines 47-55); a radio frequency (RF) amplifier which converts the optical signal into an RF signal of modulated data and outputs the RF signal (Fig. 23A; column 19, lines 56-66); a digital signal processor which demodulates the modulated data according to a modulation scheme (column 20, lines 22-32), and outputs compressed audio/video (AV) (column 19, lines 65-66; column 21, line 65 – column 22, line 1, 35-26); and an AV decoder which decodes the compressed AV data and outputs an AV signal (column 21, line 65 –

column 22, line 6; column 22, lines 25-40), wherein the data includes recording speed information and/or reproducing speed information (column 9, lines 35-39).

However, Maeda et al. do not disclose performing error correction code (ECC) processing.

Okada et al. disclose a digital signal processor, which performs error correction code (ECC) (column 35, lines 29-34).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the step of performing error correction code (ECC) disclosed by Okada et al. into the system disclosed by Maeda et al. to correct any errors occurring in the data. The incorporated feature would enhance the integrity of the data.

Allowable Subject Matter

Claims 6, 8-13, and 23-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 6 recites "the recording speed information and/or the reproducing speed information are recorded in the third through sixth bytes of the disk control zone". The prior art fails to disclose or suggest this feature.

Claim 8 recites "minimum multiplex speed data, which is minimum recording speed data or minimum reproducing speed data, is recorded in an m-th byte of the disk control zone and maximum multiple speed data, which is maximum recording speed data or maximum reproducing speed data, is recorded in an n-th byte of the disk control

zone, and m and n are one of consecutive of discontinuous numbers". The prior art fails to disclose or suggest this feature.

Claim 10 recites "the minimum multiple speed data is recorded in one of the first four bits of the zeroth through seventh bits and the last four bits of the zeroth through seventh bits of the m-th byte, and maximum multiple speed data is recordable in the other of the first four bits of the zeroth through seventh bits and the last four bits of the zeroth through seventh bits of the m-th byte." The prior art fails to disclose or suggest this feature.

Claim 11 recites "the recording speed information and/or the reproducing speed information include maximum multiple speed data and minimum multiple speed data, the minimum multiple speed data being recorded in an m-th byte of the reproduction-only area, and the maximum multiple speed data being recorded in an n-th byte of the reproduction-only area." The prior art fails to disclose or suggest this feature.

Claim 12 recites "the recording speed data and/or the reproducing speed data include maximum multiple speed data and minimum multiple speed data, the minimum multiple speed data being recorded in the first four bits of the 8 bits of an m-th byte of the reproduction-only area, and the maximum multiple speed data being recorded in the last four bits of the 8 bits of the m-th byte of the reproduction-only area." The prior art does not disclose or suggest this feature.

Claim 13 recites "maximum recording speed data, minimum recording speed data, maximum reproducing speed data, and minimum reproducing speed data are

recorded in four bytes of the reproduction-only area." The prior art does not disclose or suggest this feature.

Claim 23 recites "the recording speed information and/or the reproducing speed information include maximum multiple speed data and minimum multiple speed data, the minimum multiple speed data being recorded in an m-th byte of the reproduction-only area, and the maximum multiple speed data being recorded in an n-th byte of the reproduction-only area." The prior art does not disclose or suggest this feature.

Claim 24 recites "the recording speed information and/or the reproducing speed information include maximum multiple speed data and minimum multiple speed data, the minimum multiple speed data being recorded in the first four bits of the 8 bits of an m-th byte of the reproduction-only area, and the maximum multiple speed data being recorded in the last four bits of the 8 bits of the m-th byte of the reproduction-only area." The prior art does not disclose or suggest this feature.

Claims 25 and 26 are allowable for the same reason as discussed in claim 13 above.

Conclusion

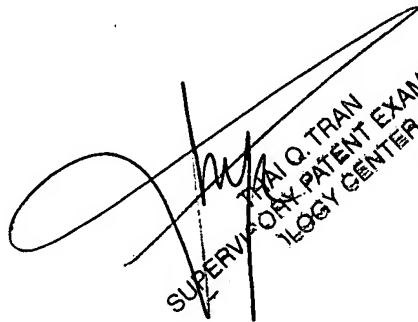
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is 571-270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hung Dang
Patent Examiner



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